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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|---|-------------|----------------------|-----------------------------|------------------------|
| 10/771,468  | 02/05/2004  | Takaaki Matsuhashi   | 14-027                      | 2937                   |
| 23400   | 7590        | 05/01/2007           |                             |                        |
| POSZ LAW GROUP, PLC<br>12040 SOUTH LAKES DRIVE<br>SUITE 101<br>RESTON, VA 20191 |             |                      | EXAMINER<br>SY, MARIANO ONG |                        |
|   |             |                      | ART UNIT<br>3683            | PAPER NUMBER           |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/771,468

**Applicant(s)**

MATSUHASHI, TAKAAKI

**Examiner**

Mariano Sy

**Art Unit**

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :2/5/04; 10/11/05; 2/13/07; 4/5/07.

### **DETAILED ACTION**

1. Applicant's election of Specie B, fig. 4, claims 1-9 in the reply filed on March 15, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. The disclosure is objected to because of the following informalities:

page 11, line 17 "Ethelene" should be --Ethylene--.

Applicant is requested to correct the above word that can be found in the entire specification.

Appropriate correction is required.

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Drawings***

4. Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled

"Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Otomo (US 6,139,119).

Otomo disclosed, as shown in fig. 2, a stroke simulator comprising: a housing; a first piston 96; a hydraulic pressure chamber 98 formed at an end side of the first piston and to which hydraulic pressure is supplied with the operation force of the brake pedal; a second piston 108 which can move integrally with the first piston; a stopper 114; a first spring 106 disposed between first piston and second piston; a second spring 116 which has a second spring constant different to a first spring constant of the first spring; the second piston has a first protruding portion 110 protrudes towards first piston and abut with first piston, and a second protruding portion 117 protrudes towards the stopper, the second piston being formed from a non-elastic material.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo in view of Winkelmann et al. (US 2002/0116924).

Otomo was silent to disclose the second piston is made of a metal or hard resin.

Winkelmann et al. teaches the use of a master cylinder comprising a piston made of steel, aluminum or plastic material, see page 1, par. [0006].

It would have been obvious to one of ordinary skill in the art to provide the second piston of Otomo to be made of metal or hard resin, as taught by Winkelmann et al., as a matter of design choice in order to minimize deformation of the piston when the piston abut the stopper during braking.

9. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo in view of Handke et al. (US 5,467,851).

Otomo disclosed, as shown in fig. 2, wherein the first and second springs are helical compression springs; the first piston includes a first fitting portion to which an end of the first spring is fitted and the second piston includes a second fitting portion to which the other end of the first spring is fitted.

However Otomo was silent to disclose the first spring is fitted to the first fitting portion by press fitting, and the first spring is fitted to the second fitting portion that is loosely fitted.

Handke et al. teaches, as shown in fig. 2, a spring 29 is forced-fitted in seat 25 a within body 25, see col. 3, lines 65-67 and col. 4, lines 1-9.

It would have been obvious to one of ordinary skill in the art to modify the stroke simulator of Otomo with the first spring is fitted to the first fitting portion by press fitting, and the first spring is fitted to the second fitting portion that is loosely fitted, as taught by Handke et al., in order to hold the spring in position so as to ease assembly.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo in view of Horiuchi et al. (US 5,038,564).

Otomo failed to disclose wherein the stopper has a guide portion that regulates a movement range of the second piston in a direction that is orthogonal to a movement direction of the second piston.

Horiuchi et al. teaches, as shown in fig. 1, stopper 59, 60n has a guide portion.

It would have been obvious to one of ordinary skill in the art to modify the stopper of Otomo with a guide portion, as taught by Horiuchi et al., in order to avoid the piston from tilting when moving towards the stopper during braking.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo in view of Winkelmann et al. as applied to claims 1 and 2 above, and further in view of Horiuchi et al. (US 5,038,564).

Otomo as modified failed to disclose wherein the stopper has a guide portion that regulates a movement range of the second piston in a direction that is orthogonal to a movement direction of the second piston.

Horiuchi et al. teaches, as shown in fig. 1, stopper 59, 60n has a guide portion.

It would have been obvious to one of ordinary skill in the art to modify the stopper of Otomo as modified with a guide portion, as taught by Horiuchi et al., in order to avoid the piston from tilting when moving towards the stopper during braking.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo in view of Horiuchi et al. as applied to claims 1 and 3 above, and further in view of Handke et al. (US 5,467,851).

Otomo as modified disclosed, as shown in fig. 2, wherein the first and second springs are helical compression springs; the first piston includes a first fitting portion to which an end of the first spring is fitted and the second piston includes a second fitting portion to which the other end of the first spring is fitted.

However Otomo as modified was silent to disclose the first spring is fitted to the first fitting portion by press fitting, and the first spring is fitted to the second fitting portion that is loosely fitted.



Handke et al. teaches, as shown in fig. 2, a spring 29 is forced-fitted in seat 25 a within body 25, see col. 3, lines 65-67 and col. 4, lines 1-9.

It would have been obvious to one of ordinary skill in the art to modify the stroke simulator of Otomo as modified with the first spring is fitted to the first fitting portion by press fitting, and the first spring is fitted to the second fitting portion that is loosely fitted, as taught by Handke et al., in order to hold the spring in position so as to ease assembly.

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Otomo in view of Winkelmann et al. and in view of Horiuchi et al. as applied to claims 1, 2, and 4 above, and in further view of Handke et al. (US 5,467,851).

Otomo, as modified disclosed, as shown in fig. 2, wherein the first and second springs are helical compression springs; the first piston includes a first fitting portion to which an end of the first spring is fitted and the second piston includes a second fitting portion to which the other end of the first spring is fitted.

However Otomo as modified was silent to disclose the first spring is fitted to the first fitting portion by press fitting, and the first spring is fitted to the second fitting portion that is loosely fitted.

Handke et al. teaches, as shown in fig. 2, a spring 29 is forced-fitted in seat 25 a within body 25, see col. 3, lines 65-67 and col. 4, lines 1-9.

It would have been obvious to one of ordinary skill in the art to modify the stroke simulator of Otomo as modified with the first spring is fitted to the first fitting portion by

press fitting, and the first spring is fitted to the second fitting portion that is loosely fitted, as taught by Handke et al., in order to hold the spring in position so as to ease assembly.

14. Claims 1-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiuchi et al. (US 5,038,564) in view of Winkelmann et al.

Claims 1 and 2 Horiuchi et al. disclosed, as shown in fig. 1, a stroke simulator 45 comprising: a housing; a first piston 56; a hydraulic pressure chamber 46 formed at an end side of the first piston and to which hydraulic pressure is supplied with the operation force of the brake pedal; second piston 57<sub>2</sub>, 60<sub>1</sub>; 57<sub>n</sub>, 60<sub>2</sub> which can move integrally with the first piston; a stopper 59, 60<sub>n</sub>; a first spring disposed between first piston and second piston; a second spring which has a second spring constant different to a first spring constant of the first spring; the second piston has a first protruding portion protrudes towards first piston and abut with first piston, and a second protruding portion protrudes towards the stopper, the second piston being formed from a non-elastic material and a rubber.

However Horiuchi et al. failed to disclose the second piston is made of a metal or hard resin.

Winkelmann et al. teaches the use of a master cylinder comprising a piston made of steel, aluminum or plastic material, see page 1, par. [0006].

It would have been obvious to one of ordinary skill in the art to provide the second piston of Horiuchi et al. to be made of metal or hard resin, as taught by

Winkelmann et al., as a matter of design choice in order to minimize deformation of the piston when the piston abut the stopper during braking.

Horiuchi et al. disclose two second pistons. It would have been obvious to one of ordinary skill in the art to use one instead of two second pistons in the stroke simulator of Horiuchi et al. as a matter of design choice in order to shorten the length of the stroke simulator depending upon the type of application.

Claims 3 and 4 Horiuchi et al. teaches, as shown in fig. 1, stopper 59, 60n has a guide portion.

Claim 9 Horiuchi et al. disclosed, as shown in fig. 1, wherein overall stroke of the stroke simulator of Horiuchi et al. can be changed by adjusting the length of 57n and 60<sub>2</sub> the second piston.

15. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horiuchi et al. in view of Winkelmann et al. as applied to claim 1 above, and further in view of Handke et al. (US 5,467,851).

Horiuchi et al. as modified disclosed, as shown in fig. 1, wherein the first and second springs are helical compression springs; the first piston includes a first fitting portion to which an end of the first spring is fitted and the second piston includes a second fitting portion to which the other end of the first spring is fitted.

However Horiuchi et al. as modified was silent to disclose the first spring is fitted to the first fitting portion by press fitting, and the first spring is fitted to the second fitting portion that is loosely fitted.

Handke et al. teaches, as shown in fig. 2, a spring 29 is forced-fitted in seat 25 a within body 25, see col. 3, lines 65-67 and col. 4, lines 1-9.

It would have been obvious to one of ordinary skill in the art to modify the stroke simulator of Horiuchi et al. as modified with the first spring is fitted to the first fitting portion by press fitting, and the first spring is fitted to the second fitting portion that is loosely fitted, as taught by Handke et al., in order to hold the spring in position so as to ease assembly.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Drott et al. (US 6,808,238)

Nakashima et al. (US 7,008,023)

Drott et al. (US 2004/0061375)

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariano Sy whose telephone number is 571-272-7126.

The examiner can normally be reached on Mon.-Fri. from 8:30 A.M. to 2:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon C. Kramer, can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

*msy* M. Sy

April 19, 2007

**DEVON C. KRAMER**  
**PATENT EXAMINER**

*Devon Kramer*  
4/27/07